

**HELICAL NEEDLE APPARATUS FOR CREATING A
VIRTUAL ELECTRODE USED FOR THE ABLATION OF TISSUE**

Abstract

A surgical apparatus for delivering a conductive fluid to a target site for subsequent
5 formation of a virtual electrode to ablate bodily tissue at the target site by applying a current
to the delivered conductive fluid. The surgical apparatus includes an elongated device
forming a helical needle. The helical needle is configured to engage bodily tissue and is
hollow for delivering conductive fluid from a fluid source. Finally, the helical needle
terminates in a needle tip. In one preferred embodiment, an electrode is associated with the
10 helical needle for applying a current to conductive fluid delivered from the helical needle.
During use, following delivery of conductive fluid, the electrode applies a current to the
delivered conductive fluid for creating a virtual electrode. The virtual electrode ablates
bodily tissue contacted by the conductive fluid.